TEST REPORT ON COARSE AGGREGATES

Lab ID	:	**CP-2017-05-18-03** **Date:20-05-2017**
Customer	:	Assistant Executive Engineer, Byatarayanapura Sub Division, BBMP, Banglore.
Address	:	Byatarayanapura Sub Division, BBMP, Banglore.
Project Name	:	Improvements to roads and drains at Shabarinagara in ward no.6, Byatarayanapura sub division.
Agency	:	Sri. N.Naveen kumar, #04, 4th cross, Jalageramma temple road, Banglore-64
Customer's Reference	:	BBMP/EE/BTP/WO/69/2017-18
Source of Sample	:	Sample supplied by Agency
Sample condition	:	Satisfactory
Date of Receipt	:	18-05-17
Sample ID No	:	2017-05-18-03/02(a)
Sample Type	:	40mm down size coarse aggregate
Reference to BIS codes	:	IS: 383:2016 (Specification for Coarse and fine Aggregates)
		IS: 2386 :1963(Part - 1,3,4) RA2011
		IS 2386 Part 1: Particle Size and Shape
		IS 2386 Part 3: Specific gravity, Density, Voids,Water Absorption
		IS 2386 Part 4: Mechanical Properties
Date of test	:	18-05-2017 to 20/05/2017

SIEVE ANALYSIS (PARTICLE SIZE DISTRIBUTION) OF 40MM DOWN COARSE AGGREGATE:

Total weight taken : 15000 grams

Sample No.	Sieve No.	Weight Retained in gms	Cumulative Weight Retained in gms	% Cumulative Weight Retained	% Passing	Required as per IS 383:2016
1	80 mm	0	0	0.0	100	100
2	40 mm	652	652	4.3	95.7	90-100
3	20 mm	4151	4803	32.0	68.0	30-70
4	10 mm	5134	9937	66.2	33.8	10-35
5	4.75 mm	4437	14374	95.8	4.2	0-5
6	Pan	626	15000	100.0	0	---

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TEST REPORT ON COARSE AGGREGATES

Lab ID : **CP-2017-05-18-03** **Date:20-05-2017**

Sample ID No : 2017-05-18-03/02(a)

PHYSICAL PROPERTIES

Sl.no	Tests	Result	Requirements as per IS:383-2016
1	Flakiness Index(%)	9.6	Combined Flakiness & Elongation Index Shall not Exceed 40% for Uncrushed & Crushed Aggregate
2	Elongation Index(%)	12.4	
3	Specific Gravity	1.61	–
4	Bulk Density(Loose) (Kg/l)	1.47	–
5	Bulk Density(Compacted) (Kg/l)	2.52	–
6	Water Absorption(%)	0.21	–

Note:

The results pertain to the samples received and tested.
All information furnished by Customer/Representative
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AE ward no 6 ಸಿಮೆಂಟ್ ರಸ್ತೆ ಕಾಮಗಾರಿ 19.05.17 ಸಹಾಯಕ ಕಾರ್ಯನಿರ್ವಾಹಕ ಅಭಿಯಂತರರು ಬ್ಯಾಟರಾಯನಪುರ ಉಪ ವಿಭಾಗ ಬಿ.ಬಿ.ಎಂ.ಪಿ., ಬೆಂಗಳೂರು-26

Prepared by
Harshitha

CIVIL Pro Sig..... Date..... BANGALORE

FOR CIVIL Pro.

R KARTHIK RECHAN
Authorized Signatory
Quality Manager

ಸಹಾಯಕ ಅಭಿಯಂತರರು
ಬ್ಯಾಟರಾಯನಪುರ ಉಪ ವಿಭಾಗ
ಬಿ.ಬಿ.ಎಂ.ಪಿ.

****End of Report****

TEST REPORT OF PHYSICAL PROPERTIES OF CEMENT - 53 Grade

Lab ID	:	**CP-2017-05-18-03** **Date: 19-05-2017**
Customer	:	Assistant Executive Engineer, Byatarayanapura Sub Division, BBMP, Banglore.
Address	:	Byatarayanapura Sub Division, BBMP, Banglore.
Project Name	:	Improvements to roads and drains at Shabarinagara in ward no.6, Byatarayanapura sub division.
Agency	:	Sri. N.Naveen kumar, #04, 4th cross, Jalageramma temple road, Banglore-64
Customer's Reference	:	BBMP/EE/BTP/WO/69/2017-18
Source of Sample	:	Sample supplied by Agency
Sample Condition	:	Satisfactory
Date of Receipt	:	18-05-17
Sample ID No	:	2017-05-18-03/01
Sample Type	:	ACC 53grade
Reference to BIS codes	:	IS 12269 : 2013, 53 Grade Ordinary Portland cement Specification , IS 4031 (Part 1,2 3,4,5, 6,11):1988 IS 4031 Part 1 DETERMINATION OF FINENESS BY DRY SIEVING, Clause 4.4 IS 4031 Part 2, Determination of Fineness by Blaine Air Permeability Method, Clause 5 IS 4031 Part 3, Determination of Soundness, Clause 5,Clause 6 IS 4031 Part 4, Determination of Consistency of Standard Cement Paste, Clause 5 IS 4031 Part 5, Determination of Initial & Final Setting Time, Clause 5 IS 4031 Part 11,DETERMINATION OF DENSITY , Clause 6
Date of test	:	18-05-2017 to 19-05-2017

Sl.No.	Physical properties	Results	Requirement as per IS 12269: 2013
1	Fineness by dry sieving (%)	3.4	–
2	Finess by Air permeablity method (m^2/kg, Min)	269.5	225m^2/kg, Min
3	Density (gm/cc)	3.2	–
4	Standard Consistency (%)	27.5%	Not specified
5	Initial Setting time	135 minutes	Not less than 30 minutes
6	Final Setting time	255 minutes	Not more than 600 minutes
7	Soundness (Le Chatelier's Method)	1mm	Not more than 10 mm

Note:
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Certificate No.: T- 4358

TEST REPORT OF PHYSICAL PROPERTIES OF CEMENT - 53 Grade

Lab ID	:	**CP-2017-05-18-03** **Date: 15-06-2017**
Customer	:	Assistant Executive Engineer, Byatarayanapura Sub Division, BBMP, Banglore.
Address	:	Byatarayanapura Sub Division, BBMP, Banglore.
Project Name	:	Improvements to roads and drains at Shabarinagara in ward no.6, Byatarayanapura sub division.
Agency	:	Sri. N.Naveen kumar, #04, 4th cross, Jalageramma temple road, Banglore-64
Customer's Reference	:	BBMP/EE/BTP/WO/69/2017-18
Source of Sample	:	Sample supplied by Agency
Sample Condition	:	Satisfactory
Date of Receipt	:	18-05-17
Sample ID No	:	2017-05-18-03/01
Sample Type	:	ACC 53grade
Reference to BIS codes	:	IS 12269 : 2013, 53 Grade Ordinary Portland cement Specification , IS 4031 Part 4, Determination of Consistency of Standard Cement Paste, Clause 5 IS 4031 Part 6, Determination of Compressive Strength, Clause 6
Date of test	:	18-05-2017 to 15-06-2017

Compressive Strength			
Sl.No.	**Physical properties**	**Results**	**Requirement as per IS 12269: 2013**
1	3 Days	28.5N/mm^2	Not less than 27 N/mm^2
2	7 Days	39.0N/mm^2	Not less than 37 N/mm^2
3	28 Days	56.5N/mm^2	Not less than 53 N/mm^2

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TEST REPORT ON COARSE AGGREGATES

Lab ID	:	**CP-2017-05-18-03** **Date: 20-05-2017**
Customer	:	Assistant Executive Engineer, Byatarayanapura Sub Division, BBMP, Banglore.
Address	:	Byatarayanapura Sub Division, BBMP, Banglore.
Project Name	:	Improvements to roads and drains at Shabarinagara in ward no.6, Byatarayanapura sub division.
Agency	:	Sri. N.Naveen kumar, #04, 4th cross, Jalageramma temple road, Banglore-64
Customer Reference	:	BBMP/EE/BTP/WO/69/2017-18
Source of Sample	:	Sample supplied by Agency
Sample Condition	:	Satisfactory
Date of Receipt	:	18-05-17
Sample ID No	:	2017-05-18-03/02(b)
Sample Type/ Size	:	20mm down size coarse aggregate
Reference to BIS codes	:	IS: 383:2016 (Specification for Coarse and fine Aggregates)
		IS: 2386 :1963(Part - 1,3,4) RA2011
		IS 2386 Part 1: Particle Size and Shape
		IS 2386 Part 3: Specific gravity, Density, Voids,Water Absorption
		IS 2386 Part 4: Mechanical Properties
Date of test	:	18-05-2017 to 20/05/2017

SIEVE ANALYSIS (PARTICLE SIZE DISTRIBUTION) OF 20MM DOWN COARSE AGGREGATE:

Total weight taken : **5000** **grams**

Sample No.	Sieve No.	Weight Retained in gms	Cumulative Weight Retained in gms	% Cumulative Weight Retained	% Passing	Required as per IS 383:2016
1	40 mm	0	0	0	100	100
2	20 mm	158	158	3.2	96.8	90-100
3	10 mm	2786	2944	58.9	41.1	25-55
4	4.75 mm	1686	4630	92.6	7.4	0-10
5	Pan	370	5000	100	0	–

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TEST REPORT ON COARSE AGGREGATES

Lab ID : **CP-2017-05-18-03** **Date: 20-05-2017**

Sample ID No : 2017-05-18-03/02(b)

PHYSICAL PROPERTIES

Sl.no	Tests	Result	Requirements as per IS:383-2016
1	Flakiness Index(%)	**11.2**	Combined Flakiness & Elongation Index Shall not Exceed 40% for Uncrushed & Crushed Aggregate
2	Elongation Index(%)	**13.6**	
3	Specific Gravity	**2.59**	_
4	Bulk Density(Loose) (Kg/l)	**1.52**	_
5	Bulk Density(Compacted) (Kg/l)	**1.59**	_
6	Water Absorption(%)	**0.25**	_
7	Aggregate crushing Value(%)	**23.2**	Max 30% for Aggregates to be used in concrete for wearing Surface, In case Aggregate Crushing Value Exceeds 30% then the test for ten percent fines should be conducted for Aggregates to be used in concrete other than for wearing Surface.
8	Aggregate Impact Value(%)	**21.5**	30% for Aggregates to be used in concrete for wearing Surface, 45% for Aggregates to be used in concrete other than for wearing Surface.

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Harshitha

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Authorized Signature
Quality Manager

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TEST REPORT OF FINE AGGREGATE

Lab ID : **CP-2017-05-18-03** **Date:** 20-05-17

Customer : Assistant Executive Engineer, Byatarayanapura Sub Division, BBMP, Banglore.

Address : Byatarayanapura Sub Division, BBMP, Banglore.

Project Name : Improvements to roads and drains at Shabarinagara in ward no.6, Byatarayanapura sub division.

Agency : Sri. N.Naveen kumar, #04, 4th cross, Jalageramma temple road, Banglore-64

Customer's Reference : BBMP/EE/BTP/WO/69/2017-18

Source of Sample : Sample supplied by Agency

Sample Condition : Satisfactory

Date of Receipt : 18-05-17

Sample ID No : 2017-05-18-03/03

Sample Type : Fine Aggregate

Reference to BIS codes : IS 383 : 2016 (Specification for Coarse and fine Aggregates)
IS: 2386 :1963(Part - 1, 3) RA2012
IS 2386 Part 1: Particle Size and Shape
IS 2386 Part 3: Specific gravity, Density, Voids,Water Absorption

Date of test : 18-05-17

Total weight taken : 1000 grams

Sl.no	Sieve Size	Weight Retained (gms)	Cumulative Weight Retained (gms)	% Cumulative Weight Retained	% Passing	Requirement as per IS 383:2016			
						Grading Zone I	Grading Zone II	Grading Zone III	Grading Zone IV
1	10 mm	0	0	0	100	100	100	100	100
2	4.75 mm	56	56	5.6	94.4	90-100	90-100	90-100	95-100
3	2.36 mm	179	235	23.5	76.5	60-95	75-100	85-100	95-100
4	1.18 mm	138	373	37.3	62.7	30-70	55-90	75-100	90-100
5	600 micron	44	417	41.7	58.3	15-34	35-59	60-79	80-100
6	300 micron	258	675	67.5	32.5	5-20	8-30	12-40	15-50
7	150 micron	283	958	95.8	4.2	0-10	0-10	0-10	0-15
8	Pan	42	1000	100	0	---	---	---	---
Result :The tested Sample Conforms to Grading Zone II									

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TEST REPORT OF FINE AGGREGATE

Lab ID : **CP-2017-05-18-03** **Date: 20-05-17**

Sample ID No : 2017-05-18-03/03

PHYSICAL PROPERTIES

Sl.no	Tests	Result	Requirements as per IS 383:2016
1	Water Absorption(%)	1.7	–
2	Specific Gravity	2.54	–
3	Material finer than 75 micron(%)	3.5	Uncrushed fine Aggregate Max 3%, Crushed Fine aggregate Max 15%, Mixed Fine aggregate Max 12%, Manufactured Fine aggregate Max 10%

Note:
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